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## **Risk factors associated with obesity among housewives residing in urban areas of Punjab, Pakistan: A descriptive study**

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**Abstract**--The rising magnitude of obesity among housewives residing in urban areas is a matter of highly concern. There is no denying the fact that obesity is a health risk and it triggers the comorbidities. Therefore, the present research study was conducted with concerted effort aiming to find out the risk factors associated with obesity among housewives in the urban areas of District Multan, Punjab. The target population of the study was housewives. A sample of 100 housewives with Body Mass Index >25 was drawn by using simple random sampling after completing the listing process. The interview schedule was conducted and well-structured research questionnaire was used to collect the data. The descriptive and inferential statistics such as frequency, percentage, mean percentage

and chi-square was employed. The results indicate that aging (p-Value<0.001), educational status (p-Value <0.003) and any form of physical activity (p-Value<0.001) were strongly associated with the obesity among housewives. Regarding the knowledge, 65% of the housewives were equipped with the knowledge of the risk factors associated with obesity among housewives residing in the urban areas of District Multan, Punjab. In the light of findings, it can be concluded that low education, aging and absence of any form of physical activity are the prominent risk factors associated with obesity among housewives. Therefore, it is recommended that awareness moves pertaining to the dietary habits and physical activities should be launched to minimize the prevalence of obesity.

**Keywords**--Obesity, Housewives, Dietary Habits, Physical Activities, Body Mass Index.

## **Introduction**

The term obesity is referred as accumulation of fat in body in a large amount. The Body Mass Index is used to measure the level of fats in the body. The health challenge of obesity has been a growing concern in many parts of the world, including Pakistan (WHO, 2017). Obesity is a complex issue influenced by various factors such as genetics, lifestyle, socioeconomic status, cultural norms, and access to healthcare (Ramachandran & Snehalatha, 2010). In Pakistan, as in many other countries, obesity has been on the rise due to changing dietary habits, sedentary lifestyles, and urbanization (Khuwaja et al, 2011). Women in Pakistan, similar to other places, might be susceptible to obesity due to factors such as limited physical activity opportunities, cultural norms regarding body image, and traditional dietary practices (Samir, Mahmud & Khuwaja, 2011).

It is considered that rate of obesity is very high in older age. The reason is that aging population avoids physical activities or regular activities and adopts sedentary life style. Resultantly, people get accumulation of fats with the growing age in their body with couples of morbidities such as heart diseases and diabetes (Jafar, Chaturvedi & Pappas, 2006). The level of awareness regarding the obesity and its cascading consequences is very poor among the general population (Tanzil & Jamali, 2016). Particularly, the rate of obesity is very high among the women residing in the urban areas of Pakistan. The women residing in the urban areas have limited mobility, no physical workout and have over-dietary behavior (Sherin, 2013).

The rate of obesity is highly alarming among women and men in Pakistan. It is estimated that 25% of women and 19% of men are obese. It means that their Body Mass Index is more than >25. Being overweight (BMI = 23-24.9) is a growing health concerns among the women residing in the urban areas of Punjab. It is a precursor to obesity and it is relatively easier to lose weight at these moderate levels than at higher levels of weight gain (Bhanji et al., 2011).

Regarding the factors contributing in the obesity among the women residing in the urban areas, these are counted as genetic transmitted, eating behaviors, lack of physical activities, indoor activities and lack of awareness. Talking about the outcomes, obesity hosts the many comorbidities. No one can deny the fact that getting obese and health seeking behavior are correlated (Sherwood et al., 21012). Therefore, the present research study has been conducted in the urban areas of District Multan to sensitize the women by finding out the associated factors of obesity among housewives.

### **Objective of the research study**

The study was conducted with the aim to dig out the associated factors of obesity among housewives residing in the urban areas of District Multan, Punjab.

### **Materials and Methods**

The research study is cross-sectional and descriptive in nature. The research was conducted in the urban areas of District Multan, Punjab. The target population of the research study was housewives. For the identification of housewives with obesity, the process of listing was executed in the urban areas of Multan. The female moderators were hired and they executed the listing process by measuring Body Mass Index (BMI) to identify the housewives with obesity. The housewives with BMI >25 have been labelled as over-weight and obese in the District Multan, Punjab. After completing the listing of housewives with obesity in the urban areas of District Multan, a sample of 100 housewives with BMI >25 was drawn by using simple random sampling.

The interview schedule was conducted with the respondents for data collection by using well-structured research questionnaire. The interview schedule was comprised of two parts as under:

- i. Demographic Characteristics of the Respondents
- ii. Risk Factors of Obesity among Housewives including Level of Knowledge

The structured questionnaire regarding the risk factors and level of knowledge was consisted of 12 questions. Each question was denoted with score from 1 to 12. The level of knowledge was categorized as given below:

- i. Score 0-5 is considered as inadequate knowledge
- ii. Score 6-7 is considered as moderate knowledge
- iii. Score 8-12 is considered as adequate knowledge

The collected data was entered into SPSS version 26.0. The descriptive and inferential statistics were employed for analysis purpose such as frequency, percentage and mean. The chi-square test was also applied to find out the relationship between risk factors and obesity among the housewives residing in the urban areas of Multan, Punjab.

## Results and Discussions

Table 1: Age-Specific Prevalence of Over-Weight and Obesity (N=100)

Age (Year)	Over-Weight or Obese Women (%) BMI>25	Chi-Square (p-value)
20-30	6.5	<0.001
31-40	21.5	
41-50	32	
51-60	40	

\*significant level at 5% (0.05)

The above table 1 represents the relationship between the age of housewives and prevalence of obesity (BMI>25) in the urban areas of District Multan, Punjab. The 40% of the housewives with older age (51-60 years) were obese, 32% of the housewives with age (41-50 years) were obese, 21.5% of the housewives with age (31-40 years) were obese and only 6.5% of the housewives with age (20-30 years) were obese. The p-Value (<0.001) indicates that there is a strong association between the age of housewives and obesity.

Table 2: Education-Wise Prevalence of Over-Weight and Obesity (N=100)

Educational Status	Over-Weight or Obese Women (%) BMI>25	Chi-Square (p-value)
No Education	35.3	<0.003
Primary	25	
Middle	17.7	
Secondary	12.5	
Higher	9.5	

\*significant level at 5% (0.05)

The above table 3 shows that housewives with no education (35.3%) had higher level of obesity, housewives with primary education (25%) were obese, housewives with middle education (17.7%) were obese, housewives with secondary education (12.5%) were obese and housewives with higher education (9.5%) were obese. The p-Value (<0.003) describes that there is a relationship between the educational status of housewives and being obese.

Table 3: Any Physical Activity and Prevalence of Over-Weight and Obesity (N=100)

Any Physical Activity	Over-Weight or Obese Women (%) BMI>25	Chi-Square (p-value)
Yes	20.8	<0.000
No	79.2	

\*significant level at 5% (0.05)

The above table 3 reveals that housewives which perform any physical activity has less chance of being obese (20.8%) and housewives with no physical activity (79.2%) were obese (BMI>25). The p-Value (<0.000) shows that there was a strong

association between the any physical activity and obesity among the housewives in the urban areas of District Multan, Punjab.

Table 4: Level of Knowledge about Risk Factors Associated with Obesity among Housewives in Urban Areas of District Multan, Punjab (N=100)  
Inadequate Knowledge=0-5, Moderate Knowledge=6-8, Adequate Knowledge=9-12

Level of Knowledge	Knowledge %	Mean%
Inadequate Knowledge	25	88
Moderate Knowledge	65	
Adequate Knowledge	10	

\*Total score=12

The above table 4 represents that 25% of the housewives in the urban areas of District Multan had inadequate knowledge of the risk factors associated with obesity, 65% of the housewives had moderate knowledge of the risk factors associated with obesity and 10% of the housewives were well equipped with the knowledge of the risk factors associated with obesity. The mean percentage (88%) also proves that higher number of housewives (65%) had moderate knowledge about the risk factors associated with the obesity among housewives residing in the urban areas of District Multan, Punjab.

### Conclusion

The above findings of the study and discussions can be concluded that obesity among housewives in the urban areas of District Multan, Punjab is highly prevalent. The findings of the research study are coherent with the objective of the study. In the light of findings, risk factors associated with the prevalence of obesity among housewives have been established by ensuring the confidentiality and privacy of the respondents. The most prominent risk factors associated with the obesity among housewives are the lack of knowledge, no physical activity, spending more time in the house chores and aging. It can be recommended that awareness campaigns, seminars and workshops should be conducted to disseminate the knowledge and health risks of the obesity among housewives. Apart from this, physical activities, appropriate dietary habits and health seeking behavior should be promoted among all women at every tier.

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